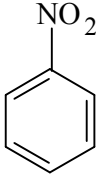




**Hemijski fakultet Univerziteta u Beogradu**  
**Prijemni ispit, 27. jun 2016. godine**  
**Rešenja zadataka i ključ za bodovanje testa**

| Zadatak        | Tačan odgovor  | Broj poena  |
|----------------|--|---|
| 1.             | a)   | 1 x 4 = 4   |
| 2.             | b)   | 1 x 4 = 4   |
| 3.             | $2 \text{ NaOH} + \text{H}_2\text{PHO}_3 \rightarrow \text{Na}_2\text{PHO}_3 + 2 \text{ H}_2\text{O}$  | 1 x 4 = 4   |
| 4.             | a) NE; b) DA; c) NE; d) DA   | 4 x 1 = 4   |
| 5.             | Koncentraciju azot(II)-oksida bi trebalo <b> smanjiti 2 puta</b>   | 1 x 4 = 4   |
| 6.             | pH = 12; pOH = 2   | 2 + 2 = 4   |
| 7.             | 40 g kalcijum-nitrata i 160 g vode   | 2 + 2 = 4   |
| 8.             | c)   | 1 x 4 = 4   |
| 9.             | $3 \text{ Cu} + 8 \text{ HNO}_3 \rightarrow 3 \text{ Cu}(\text{NO}_3)_2 + 2 \text{ NO} + 4 \text{ H}_2\text{O}$<br>$\text{Cu}^0 \xrightarrow{-2e^-} \text{Cu}^{+2} \times 3$ (oksidacija)<br>$\text{N}^{+5} \xrightarrow{+3e^-} \text{N}^{+2} \times 2$ (redukcija)<br>448 cm <sup>3</sup> gasa  | 2 poena za jednačinu reakcije oksidoredukcije<br><br>2 poena za izračunavanje zapremine gasa<br>2 + 2 = 4 |
| 10.            | a) 3-metil-pentalan <span style="margin-left: 100px;"><u>CH<sub>3</sub>CH<sub>2</sub>CH(CH<sub>3</sub>)CH<sub>2</sub>CHO</u></span><br>b) nitrobenzen <span style="margin-left: 100px;"></span><br>c) <u>2-metil-1,3-butadien</u> <span style="margin-left: 100px;">CH<sub>2</sub>=CHC(CH<sub>3</sub>)=CH<sub>2</sub></span><br>d) <u>etil-propanoat</u> <span style="margin-left: 100px;">CH<sub>3</sub>CH<sub>2</sub>COOCH<sub>2</sub>CH<sub>3</sub></span> | 4 x 1 = 4   |
| 11.            | a) $\text{CH}_2=\text{C}(\text{CH}_3)\text{CH}_2\text{CH}_3 + \text{HCl} \rightarrow \text{CH}_3\text{C}(\text{CH}_3)\text{ClCH}_2\text{CH}_3$<br>b) $\text{CH}_3\text{CH}_2\text{COOCH}_3 + \text{NaOH} \rightarrow \text{CH}_3\text{CH}_2\text{COONa} + \text{CH}_3\text{OH}$  | 2 + 2 = 4   |
| 12.            | $\text{CH}_3\text{COCl} + \text{CH}_3\text{CH}_2\text{CH}_2\text{OH} \rightarrow \text{CH}_3\text{COOCH}_2\text{CH}_2\text{CH}_3 + \text{HCl}$   | 1 x 4 = 4   |
| 13.            | a) NE; b) NE; c) DA; d) DA   | 4 x 1 = 4   |
| 14.            | e)   | 1 x 4 = 4   |
| 15.            | d)   | 1 x 4 = 4   |
| <b>Ukupno:</b> |  | <b>60 poena</b>   |